

Supplemental Material, Table 1. Published studies reporting associations between exposure to PBDEs and thyroid hormone levels in pregnant and nonpregnant (a) animals and (b) humans.

(a) Animal Studies

Reference	N ^a	Animals	Exposure	Thyroid hormone		
				TSH	FT4	TT4
Pregnant						
Zhou et al. (2002)	38-55	Long-Evans rats	BDE-71			↓
Skarman et al. (2005)	13-22	NMRI mice	Bromkal 70-5DE BDE-99		NS	NS
Nonpregnant						
Fowles et al. (1994)	6-8	C57BL/6J mice	DE-71		↓	↓
Gee et al. (2008) ^b	26-32	Mice (strain not indicated)	BDE-47			NS
Hakk et al. (2002) ^b	3-5	Sprague-Dawley rats	BDE-99			↑
Hallgren et al. (2001)	6-10	Sprague-Dawley rats	Bromkal 70-5 BDE-47	NS NS	↓ ↓	↓ ↓
Hallgren et al. (2001)	8-12	C57BL/6N mice	Bromkal 70-5 BDE-47	NS NS	↓ ↓	↓ ↓
Hallgren and Darnerud (2002)	6	Sprague-Dawley rats	BDE-47	NS	↓	NS
Rice et al. (2007)	6-11	C57BL/6J mice	BDE-209			NS(↓) ^c
Richardson et al. (2008)	10	C57BL/6 mice	BDE-47			↓
Stoker et al. (2004)	15	Wistar rats	DE-71	↑ ^d		↓
van der Ven et al. (2008)	5	Wistar rats	DE-71			↓
Zhou et al. (2001)	4-8	Long-Evans rats	DE-71 DE-79 DE-83R	NS NS NS	↓ ↓ NS	NS

(b) Human Studies

Reference	N	Exposure	Thyroid hormone		
			TSH	FT4	TT4
Pregnant					
Mazdai et al. (2003)	9	Σ PBDEs ^e		NS	NS
Nonpregnant					
Bloom et al. (2008)	36	Σ PBDEs ^f BDE-28, 47, 66, 85, 99, 153, 154 BDE-100, 138	NS(↓) NS(↓) NS(↑)	NS(↑) NS(↑) NS(↑)	
Dallaire et al. (2009)	623	BDE-47, 153	NS(↓)	NS(↑)	
Hagmar et al. (2001)	110	BDE-47	↓	NS	NS
Julander et al. (2005)	11	BDE-28, 153, 183 BDE-47, 99, 100, 154	NS NS	NS(↑) NS	
Meeker et al. (2009) ^g	24	BDE-47, 99 BDE-100	NS(↑) NS(↓)	↑ NS(↑)	
Turyk et al. (2008)	308	Σ PBDEs ^h BDE-47 BDE-99 BDE-100 BDE-153	↓ ↓ NS(↓) NS(↓) NS	↑ ↑ ↑ NS ↑	NS(↑) NS(↑) NS NS ↑
Yuang et al. (2008)	49	Σ PBDEs ⁱ		↑	

Note: Arrows indicate increases or decreases in thyroid hormone with increasing PBDE exposure. Animal studies were conducted in females unless indicated otherwise. For human studies, PBDEs were measured in serum unless indicated otherwise.

NS: Not statistically significant at $p < 0.05$. Arrows in parenthesis indicate the direction of a non-statistically significant trend (when reported).

^a Number of animals per exposure group.

^b Male animals.

^c Not statistically significant in females only. A dose-related statistically significant decrease was observed in males.

^d Not statistically significant in females only. A dose-related statistically significant increase was observed in males.

^e Sum of BDE-47, 99, 100, 153, 154, and 183.

^f Sum of BDE-28, 47, 66, 85, 99, 100, 138, 153, and 154.

^g PBDEs measured in house dust.

^h Sum of BDE-28, 47, 49, 85, 99, 100, 138, and 153.

ⁱ Congeners measured not specified.

Supplemental Material, Table 2. Pearson's correlations between log₁₀-transformed polybrominated diphenylether (PBDE) congeners in pregnant women's serum (n=270).

	BDE-28	BDE-47	BDE-99	BDE-100
BDE-47	0.75*			
BDE-99	0.68*	0.94*		
BDE-100	0.73*	0.96*	0.92*	
BDE-153	0.63*	0.81*	0.77*	0.90*

* p < 0.001

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